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WHAT IS CLAIMED IS:

- 1. A network device, comprising:
 - a) a converter operable to convert a packet data stream to a public switched telephone network data stream; and
- b) a controller operable to:
 - i) send signals in the public switched telephone network data stream identifying the network device as a packet device;
 - ii) receive signals indicating at least one other network devices are participating in a public switched transmission session with the network device; and
 - iii) send the packet data stream across the public switched transmission network directly to the at least one other network device.
 - 2. The network device of claim 1, wherein the network device is a voice gateway.
 - 3. The network device of claim 1, wherein the packet data stream further comprises coded voice.
- 15 4. The network device of claim 1, wherein the packet data stream further comprises data.
 - 5. The network device of claim 1, wherein the converter further comprises a voice coder/decoder.
 - 6. The network device of claim 1, wherein the converter further comprises a modem.
 - 7. The network device of claim 1, wherein the controller uses ITU V.8 protocols.
- 20 8. The network device of claim 1, wherein the controller uses robbed-bit signaling.
 - 9. The network device of claim 1, wherein the controller is a processor configured to execute all control operations.
 - 10. The network device of claim 1, wherein the controller further comprises more than one integrated circuit.
- 25 11. A network device, comprising:
 - a) a means for converting a packet data stream to a public switched transmission network data stream; and
 - b) a means for controlling the network device, wherein controlling the network device includes:
 - i) sending signals in the public switched telephone network data stream identifying the network device as a packet device;
 - ii) receiving signals indicating at least one other network devices are participating in a public switched transmission session with the network device; and

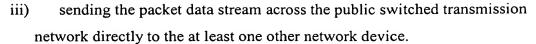
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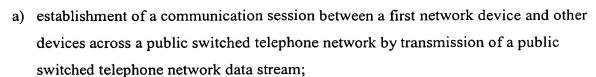


- 12. A method of transmitting a packet data stream across a public switched telephone network, the method comprising:
- a) establishing a communication session between a first network device and other devices across a public switched telephone network by transmission of a public switched telephone network data stream;
 - b) using transmission of identifying signals to identify at least one other network device participating in the communication session; and
 - c) altering the communication session between the first network device and the at least one other network device to transmit a packet data stream.
 - 13. The method of claim 12, wherein establishing a communication session further comprises dialing out of a packet domain to a public switched telephone network domain.
 - 14. The method of claim 12, wherein using transmission of identifying signals further comprises transmitting signals in accordance with ITU Recommendation V.8.
 - 15. The method of claim 12, wherein altering the communication session further comprises eliminating a conversion through a voice coder/decoder.
 - 16. The method of claim 12, wherein altering the communication session further comprises eliminating a conversion through a modem.
- 20 17. The method of claim 12, wherein the method further comprises:
 - a) gathering information on the at least one other network device; and
 - b) storing the information for future use.
 - 18. The method of claim 17, wherein using transmission of identifying signals further comprises:
 - a) accessing a storage of known network devices based upon the identifying signals;
 - b) locating information about the at least one other network device; and
 - c) using that information in altering the communication session.
 - 19. The method of claim 12, wherein using transmission of identifying signals further comprises the first network device sending the identifying signals.
- 20. The method of claim 12, wherein using transmission of identifying signals further comprises the first network device receiving and responding to identifying signals sent by another network device.
 - 21. A computer-readable medium including software code that, when executed, results in:

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- b) use of identifying signals to identify at least one other network device participating in the communication session; and
- c) alteration of the communication session between the first network device and the at least one other network device to transmit a packet data stream.

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